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ABSTRACT

A stratified random sample was used to determine whether differences existed among the various levels of management personnel in physical, cultural, social, and home types of recreational activities. Approximately 70% of the samples (28 top-level managers, 25 middle-level managers, and 85 lower-level managers from two midwestern power company offices and an international corporation's midwestern office) completed and returned questionnaires consisting of demographic questions and one multidimensional question pertaining to participation in recreational activities. The activities were listed according to the four categories mentioned above; respondents at each managerial level indicated their degree of participation, from "frequently" to "never." Certain significant differences were found in types of recreational activities among the different management levels: top management is distinguished from the other levels by theater attendance and bridge playing, and from middle management by golf playing; middle management is distinguished by its participation in tennis and dancing; and lower management is distinguished by participation in church activities, stereo hobbies, and games and nonparticipation in bridge. Similar findings in two 1950's studies tend to indicate the study findings can be generalized for a wider population. The questionnaire and an annotated bibliography are included. (AJ)

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AN ANALYSIS OF HIERARCHICAL^c
STRUCTURE AND RECREATIONAL ACTIVITY

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THE PROBLEM

A brief review of the literature concerning leisure time and recreational activities of various cultural, ethnic, income, occupational, and professional groups revealed a scarcity of material depicting an investigation of the recreational activities pertaining to managerial personnel.

Specifically, various sociological research studies have generally stated that production personnel are experiencing a shorter work week and a heightened interest and participation in recreational types of off-work activities. However, management personnel, quite the contrary, are experiencing longer time commitments in work involved tasks and responsibilities with a consequent decrease in the time available for recreational or leisure time activities.

A few articles have been published concerning executive interests, from various organizations, in sports such as: skiing, skydiving, sailing, mountain climbing, etc. However the review of literature failed to disclose a study that specifically attempted to survey the participation of "management" personnel in a broad range of recreational and leisure time activities.

The need to acquire data illustrating the total spectrum of recreational activities of management personnel is apparent if the total role of management personnel is to be understood. The intention of the investigators was to provide current data to highlight this particular aspect of the manager's role.

STATEMENT OF THE PROBLEM

The purpose of this study was to investigate the differences, if any, among the various levels of management personnel in physical, social, cultural, and home types of recreational or leisure time activities.

LIMITATIONS OF THE STUDY

1. The results of this study and consequently the analysis and discussion of the various recreational activities of different levels of management personnel are limited to the answers indicated on the questionnaire. (Appendix A)
2. The respondents used for this study include only those persons who were working in positions designated as management personnel.
3. Another aspect of this study that received serious consideration by the investigators was the limitation of the instrument for assessing recreational activities. Because of the time restrictions, there was no attempt to determine the reliability and the validity of the instrument. However, it can be readily recognized that the instrument does possess content or face validity.
4. The inferences relative to the recreational activities of the surveyed managers rests upon the responses provided by the respondents at the time of data collection. The investigators wish to emphasize that the data, if it were to be collected in another year or two, might reflect a recreational or leisure time activity representing the fad for that particular period of time.
5. Inferences from this study should only be made relative to organizations that are similar to Kalamazoo and Jackson Consumers Power and Indianapolis International Harvester.

6. Due to the time restrictions, the data was not analyzed in terms of the following variables: age, income, various management positions, and educational levels.

IMPORTANCE OF THE STUDY

The present investigation will furnish information on the recreational and leisure time activities of personnel occupying various levels of management.

ASSUMPTIONS

1. The sample of respondents used for this study is representative of the various levels of management positions.
2. The recreational activity instrument was constructed to include the most common activities that pertained to management personnel.
3. The recreational activity instrument was an accurate assessment of the manager's recreational and leisure time activities.
4. Since the questionnaire was anonymous, it was assumed that various potential exogenous variables were not influencing the subjects' response to the recreational activities instrument.

DEFINITIONS

Top level managers: Are operationally defined as those management personnel who supervise middle managers and who report to the organization's president or senior officer.

Middle level managers: Are operationally defined as those personnel who supervise lower level managers and who report to those individuals occupying top management positions.

Lower level managers: Are operationally defined as those individuals who perform first line supervision and report to middle management personnel.

Recreational activities: Are operationally defined as the responses indicated on the recreational activities questionnaire.

Leisure time activities: For this study, this term was synonymous with the definition given for recreational activities.

Physical activities: Are those activities presented within the items under category "A" in the recreational activities questionnaire.

Cultural activities: Are those activities presented within the items under category "B" in the recreational activities questionnaire.

Social activities: Are those activities presented within the items under category "C" in the recreational activities questionnaire.

Home activities: Are those activities presented within the items under category "D" in the recreational activities questionnaire.

HYPOTHESES

The following hypotheses are stated in their null form:

Null Hypothesis 1. There will be no differences in the comparison of top, middle, and lower management levels in their physical type of recreational or leisure activities.

Null Hypothesis 2. There will be no differences in the comparison of top, middle, and lower management levels in their cultural type of recreational or leisure activities.

Null Hypothesis 3. There will be no differences in the comparison of top, middle, and lower management levels in their social type of recreational or leisure activities.

Null Hypothesis 4. There will be no differences in the comparison of top, middle, and lower management levels in their home type of recreational or leisure activities.

METHOD

RESEARCH DESIGN

A stratified random sample design was used to determine if differences existed among the various levels of management positions in physical, cultural, social and home types of recreational or leisure time activities.

SUBJECTS

The random samples drawn from three different levels of management personnel included twenty-eight top level managers, twenty-five middle level managers, and eighty-five lower level managers from the Kalamazoo and Jackson offices of Consumers Power Company and the Indianapolis office of International Harvester Corporation.

All subjects were currently employed males who responded to the recreational activities questionnaire during the period of November 11, 1973 through November 26, 1973. From the total of the 138 questionnaires distributed during this period, ninety-six questionnaires (twenty-four top level managers, twenty-four middle level managers, and forty-eight lower level managers) were completed and returned to the investigators. The total of ninety-six complete questionnaires represented a response percentage of 69.9 per-cent. The following table depicts the age, salary, educational, sex, and ethnic factors of the three levels of management.

TABLE I
DEMOGRAPHIC DATA OF VARIOUS
FACTORS FOR THE THREE LEVELS
OF MANAGEMENT PERSONNEL

Factor	Top Mgmt.	Middle Mgmt.	Lower Mgmt
Age (Avg.)	50-54	40-44	40-44
Salary (Avg.)	\$20,000+	\$20,000	\$10-20,000
Educ. (Most Common)	BA	BA	BA
Sex	24 Male	24 Male	48 Male
Ethnic	24 White	2 Black 21 White 1 Mexican Am.	1 Black 47 White

INSTRUMENTATION

The instrument used to collect data consisted of demographic data questions pertaining to age, annual salary, sex, education, present position, and ethnic background, and one multidimensional question pertaining to participation in recreational activities (Appendix A). In constructing the instrument, the recreational activities were listed in four categories to include: physical activities, part "A"; cultural activities, part "B"; social activities, part "C"; and home activities, part "D". All respondents were asked to indicate their degree of participation or non participation in the various activities by checking the "frequently", "often", "sometimes", "seldom", or "never" category. Since a participatory response could elicit a multitude of activity participation levels, the

7

investigators selected four indicators of participation. Some confusion was expressed by the respondents concerning the meaning of frequently, often, sometimes, and seldom, however, no attempt was made to define these categories in terms of quantity. Consequently, the instrument may possess an inherent weakness in eliciting similar subject responses. If the recreational activity portion of the instrument were to be used in another study, the investigators recommend using categories of participation in terms of numbers, such as zero for "never", one to ten for "seldom", eleven to twenty for "sometimes", twenty-one to thirty for "often", and thirty-one or more for "frequently" during a specified period of time. Another alternative would be to simply ask the respondent how many times he participated in each of the activities during a specific period of time. Both of these suggestions may enhance the validity and reliability of the questionnaire.

DATA ANALYSIS AND RESULTS

PHYSICAL TYPES OF RECREATIONAL OR LEISURE ACTIVITIES

Null Hypothesis 1 stated that there would be no significant differences in a comparison of top, middle, and lower management levels concerning physical types of recreational or leisure time activities. The data portrayed in Table 1 presents the percentages, computed from the collected raw data, of responses in the five participatory categories by the three levels of management. Percentages were used in place of the raw data to provide a visual comparison of the responses by subjects. Table 2 contains the chi square statistic used to reject Null Hypothesis 1 at less than the .001 level of confidence. For this investigation, the .05 level of confidence was used to determine significant differences. There was indeed a significant difference in participation in physical activities by the subjects in three management levels.

Table 1 presents the percentage of responses by twenty-four top level managers, twenty-four middle level managers, and forty-eight lower level managers to the sixteen different physical activities that have been listed under category "A" in the recreational activities instrument. In a comparison of top and middle managers, more top managers, as can be noted in the "never" category, than middle managers, did not participate in physical types of recreational activities; however, when they did participate, it can be noted that they did so with a fairly even distribution across the four categories. Middle managers, on the other hand, tended to participate in the form of a "j" curve, with the highest percentage of participation in the "seldom" category. Table 1 also shows that lower level management subjects participated in a pattern similar to that of the middle management group.

They, unlike the middle management group, showed the highest participation response in the "sometimes" category and had the highest percentage, out of all three groups, in the "never" or nonparticipation category.

TABLE 1
PERCENTAGE OF RESPONSES BY TOP, MIDDLE AND
LOWER MANAGEMENT LEVELS IN PARTICIPATION/
NONPARTICIPATION CATEGORIES OF PHYSICAL ACTIVITIES

Group	N	Participatory Factor					Total Response
		Frequent	Often	Sometimes	Seldom	Never	
Top Mgmt	24	16.4%	11.5%	13.6%	17.7%	40.8%	384
Middle Mgmt	24	8.3%	10.1%	22.7%	25.0%	33.9%	384
Lower Mgmt	48	7.7%	10.0%	21.2%	18.1%	43.0%	768

TABLE 2
VALUES OF CHI-SQUARE FOR MANAGEMENT
LEVEL PARTICIPATION IN RECREATIONAL
ACTIVITIES

Factor	Groups compared	df	χ^2 Value
Physical Activities	Top-Middle-Lower mgmt.	8	44.05 **
Cultural Activities	Top-Middle-Lower mgmt.	8	21.65 *
Social Activities	Top-Middle-Lower mgmt.	8	37.81 **
Home Activities	Top-Middle-Lower mgmt.	8	33.87 **

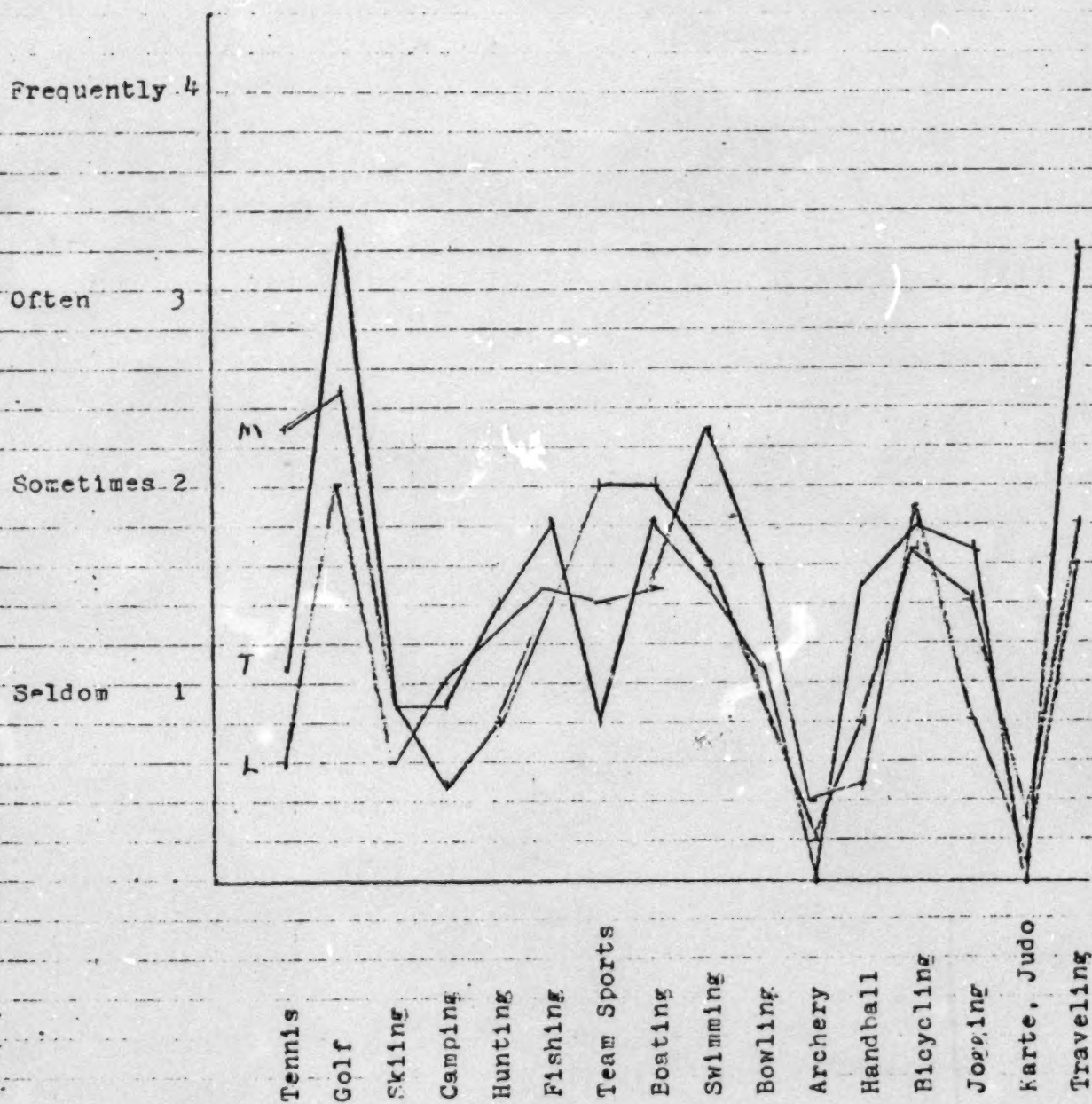
* $p < .01$

** $p < .001$

Figure 1 portrays a profile of participation in physical activities by the three management levels. In constructing the profile, subject responses were given a weight of four, three, two, one, or zero for the respective scales, "frequently", "often", "sometimes", "seldom", and "never". The mean of the subjects' responses for each group was then used to plot the various points on the profile. A review of Figure 1 revealed parallel patterns of participation in skiing, camping, hunting, fishing, boating, swimming, bowling, archery, bicycling, jogging, and karate and judo. It can also be noted that a degree of dispersion exists in tennis, golf, team sports, handball, and traveling among the three levels of management. Time did not permit the analysis of each single physical activity; however, the chi square statistic was used to determine if differences did exist in those activities showing differences in the degree of group participation. To apply the chi square statistic to the individual activities of Tables 3, 5, 7, and 9, cells representing "often" and "frequently", "seldom" and "sometimes" were combined to provide sufficient responses in the cells for a three by three crossbreak table. The Yate's correction value was applied through a computerized program to those cells containing fewer than five responses. Table 3 has presented the chi square value, the degrees of freedom, and the level of significance for the statistical analysis of tennis, golf, team sports, handball and traveling types of physical activities. Figure 1 depicts that the obtained observations differ significantly from the computed contingency table expectancies at the .01 level of confidence or lower in four of the five physical activities. For team sports, the obtained observations did not differ significantly from the computed expected values. A review of the raw data revealed that the

FIGURE 1

Recreational Activities Profile
For Physical Types of Activity for Top, Middle, and Lower levels of
Management



majority of top level managers participated "seldom"/"sometimes" in tennis. Middle managers placed the majority of their responses in the "often"/"frequently" category, and lower level managers in the "never" category. In fact, thirty-one out of forty-eight lower level managers (65 per-cent) indicated that they never participate in tennis. This appears to be a sport enjoyed primarily by middle managers.

TABLE 3
VALUES OF CHI SQUARE FOR MANAGEMENT LEVEL
PARTICIPATION IN SELECTED PHYSICAL TYPES OF
ACTIVITIES

Factor	Groups Compared	df	χ^2 Value
Tennis	Top-Middle-Lower Mgmt	4	26.39 **
Golf	Top-Middle-Lower Mgmt	4	21.47 **
Team Sports	Top-Middle-Lower Mgmt	4	8.99
Handball	Top-Middle-Lower Mgmt	4	23.02 **
Traveling	Top-Middle-Lower Mgmt	4	25.76 **

** $p < .001$

The raw data for golf showed that the majority of responses for top level and lower level managers fell in the "often" to "frequently" category, whereas the majority of responses for middle managers fell in the "sometimes" to "seldom" category.

The responses relative to the activity, team sports, did not exceed those expected by chance. Consequently, the majority of top, middle, and lower levels of management indicated they participated "seldom" to "sometimes" in team sports.

For handball, the majority of top level and lower level managers indicated that they did not participate in this activity. The majority of middle managers indicated they participated "seldom" to "sometimes". Although the majority of top level managers indicated that they did not participate in handball, 38 percent of the remaining subjects responded that they participated in the activity "often" to "frequently". The heaviest rate of participation was indeed enjoyed by top level managers.

In a comparison of the responses concerning the activity traveling, the majority of top level managers indicated they traveled as an activity "often" to "frequently". Both middle level managers and lower level managers indicated that their involvement with this activity was in the "seldom" to "sometimes" category. It should be mentioned that the validity of this activity was questionable. The investigators felt that the subjects were sometimes responding relative to the activities concerning their working position. A logical assumption could be made that in the course of their business activities top level managers would be doing more traveling than lower levels of management. Their response could also be a reflection of the particular organization and the nature of the organization's product. If the study were to be replicated, this activity should receive critical review concerning its listing as a physical activity. The original intent of the question was in reference to touring, Sunday drives, etc.

In summary, concerning the physical types of recreational or leisure activities, the significant difference at the .001 level of confidence as shown in Table 2 and the rejection of Null Hypothesis 1 can be attributed primarily to those activities presented in Table 3. If time had permitted, this data on physical activities could have also been analyzed in terms of the following variables: age, income, various management positions, and educational levels.

CULTURAL TYPES OF RECREATIONAL OR LEISURE ACTIVITIES

As indicated previously, Null Hypothesis 2 stated that there would be no significant difference in a comparison of Top, Middle, and Lower management levels concerning cultural types of recreational or leisure time activities. The data portrayed in Table 1 presents the percentages, computed from the collected raw data of responses in the five participatory categories by the three levels of management. Percentages were used in place of the raw data to provide a visual comparison of the responses by subjects. Table 2 contains the chi square statistics used to reject Null Hypothesis 2 at less than the .01 level of confidence. There was a significant difference in participation in cultural activities by the subjects in three management levels.

Table 4 presents the percentages of responses by twenty-four top level managers, twenty-four middle level managers, and forty-eight lower level managers to six different cultural activities that have been listed under category "B" in the recreational activities instrument. The percentages under the "never" response are as one might intuitively expect. Likewise, one would expect to find a high percentage of top managers responding positively to the "frequent" response; this is not the case. "Sometimes"/"seldom" appears to be the mode which, percentage wise, is not significantly different from middle and lower managers.

TABLE 4
PERCENTAGE OF RESPONSE BY TOP, MIDDLE, AND LOWER
MANAGEMENT LEVELS IN PARTICIPATION/NON PARTICIPATION
CATEGORIES OF CULTURAL ACTIVITIES

Group	N	Participatory Factor					Total
		Frequent	Often	Sometimes	Seldom	Never	
Top Mgmt	24	13.2%	9.8%	20.1%	20.1%	36.8%	144
Middle Mg.	24	3.5%	6.2%	27.8%	23.6%	38.9%	144
Lower Mgt.	48	5.9%	4.9%	18.7%	23.3%	47.2%	288

Figure 2 shows a profile of participation in cultural activities by the three management groups. In constructing the profile, a subject's response on the "never" to "frequently" continuum was weighted as zero through four respectively. The means (see Appendix B) of the subjects' responses for each activity was then listed, to plot the points on the profile. A brief review of Figure 2 shows a high degree of similarity among the management groups in their propensity to attend movies and play musical instruments. There is a great deal of dispersion among the groups in concert attendance. Top managers tend to be "often" theatre goers. Amateur theatre showed almost no participation by any of the groups.

To apply the chi square statistic to the individual activities of Figure 2, cells representing "often", "frequently", "sometimes", and "seldom" were combined to provide sufficient responses in the cells for a three by three crossbreak table. The Yate's correction value was applied through a computerized program to those cells containing fewer than five responses.

TABLE 5
VALUES OF CHI SQUARE FOR MANAGEMENT
LEVEL PARTICIPATION IN SELECTED CULTURAL
TYPES OF ACTIVITIES

Factor	Groups compared	df	χ^2 Value
Attend Theatre	Top-Middle-Lower Mgmt	4	18.52 *
Concerts	Top-Middle-Lower Mgmt	4	13.30 **
Amateur Theatre	Top-Middle-Lower Mgmt	4	5.71 ***

* $p < .001$

** $p < .01$

*** $p < .30$

FIGURE 2

Recreational Activities Profile
For Cultural Types of Activities for Top, Middle, And Lower Levels of Management

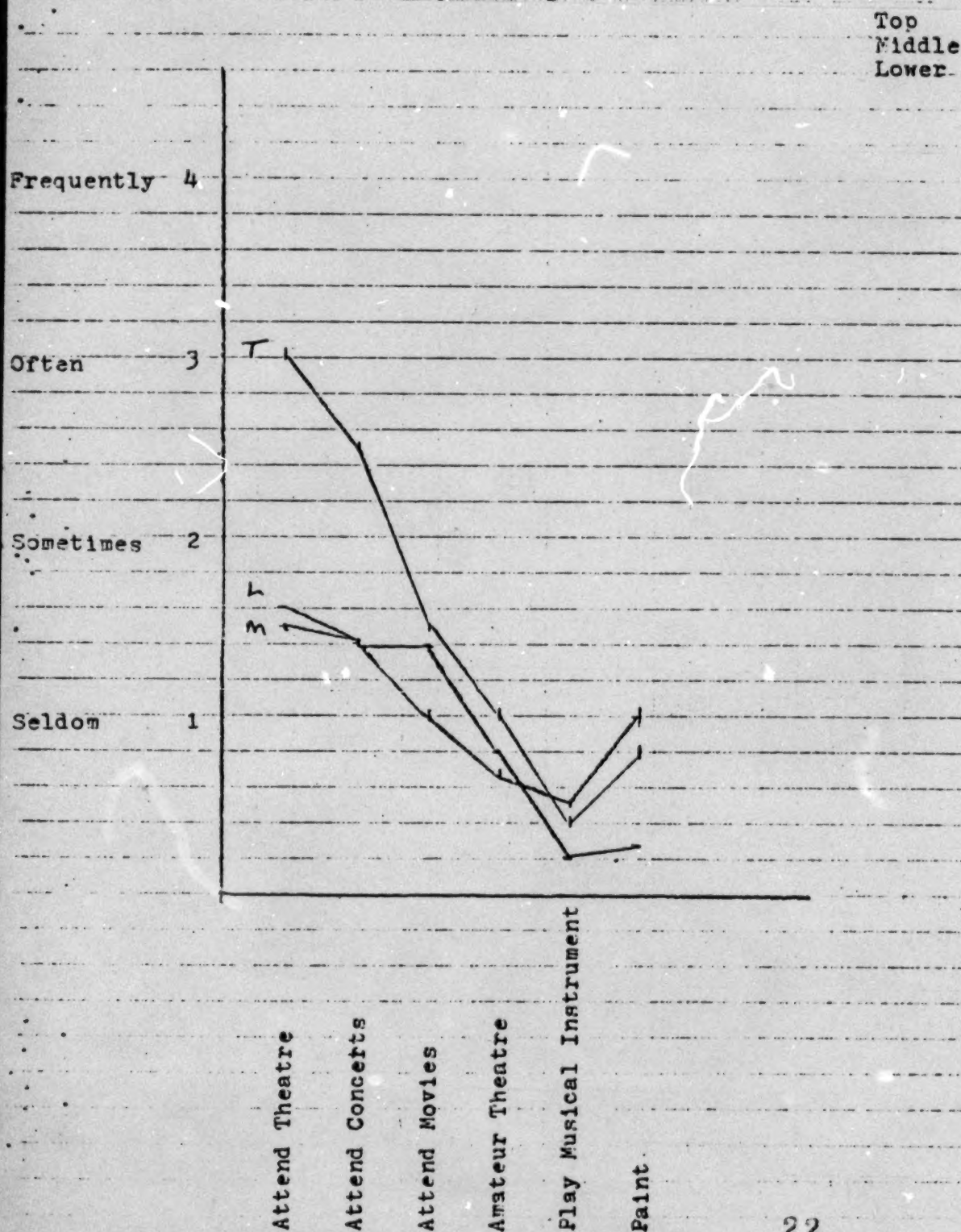


Table 5 has presented these factors: attend theatre, concerts, and amateur theatre; groups compared, degrees of freedom, chi square value and the level of significance for the statistical analysis. The chi square in table five corroborate our findings in the profile of Figure 1 - there is a significant difference (.001 level) between top, middle, and lower managers in theatre attendance, etc.

In summation, it would appear that at least two significant differences found in Table 5 had a great deal of influence on what was observed in Table 2 (.01 level of significance for cultural activities), and the subsequent rejection of the Null Hypothesis. Of course, there were variables such as age, income, various management positions, and educational levels that a more in-depth analysis would include. Unfortunately, time did not permit this.

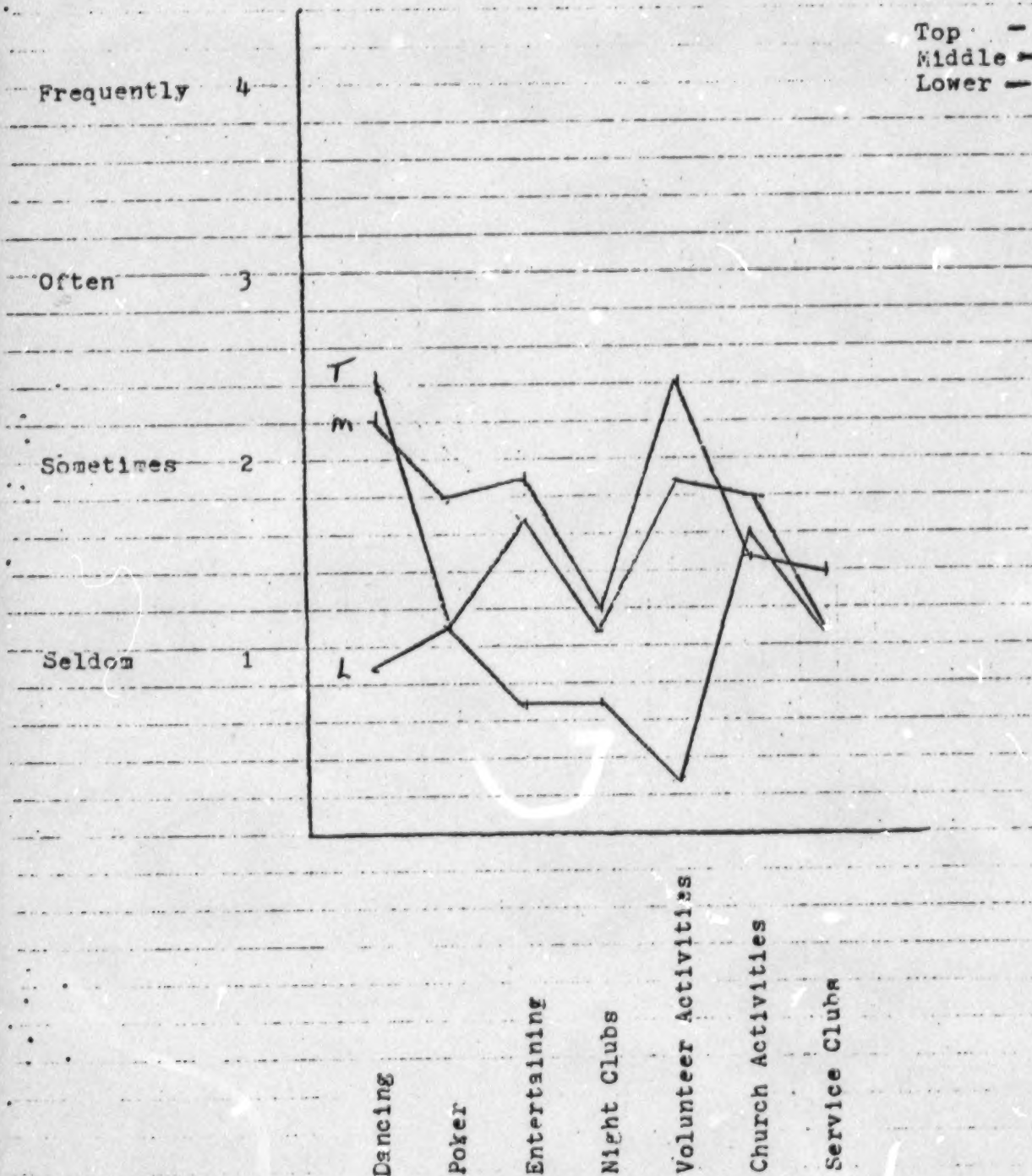
SOCIAL TYPES OF RECREATIONAL OR LEISURE ACTIVITIES

Null Hypothesis 3 states that there would be no significant differences in company top, middle, and lower levels of management in regards to their recreational or leisure activities. The data in Table 6 presents the percentage calculated from the raw data, of response in the five participatory categories by the three levels of management. Percentages were used to give more realistic comparison, since the number of respondents differs between levels of organization. Table 2 contains the chi square statistic for social activities (37.81) which rejects the Null Hypothesis with 99.9% that in fact there is a real difference within the three group population.

Table 6 presents the percentage of responses by twenty-four top level managers, twenty-four middle level managers, and forty-eight lower level managers to the seven different social activities under category "C". In comparing the top and middle managers, 52.47% of top managers either "never"

FIGURE 3

Recreational Activities Profile
For Social Types of Activities for Top, Middle, and Lower levels of
Management



or "seldom" engage in social activities, while 43.5% of middle managers "never" or "seldom" participate in social activities. 17.9% of top managers are "frequently" active in social activity, while 8.9% of middle managers display this pattern. The top management tended to participate in the form of a skewed curve, with the highest percentage in "seldom"/"never", but a degree of participation in "frequently". Middle management's total participation resembles an elongated Bell curve. Table 6 also shows that the pattern for lower level managers resembles a linear function. This group goes from 6.3% ("frequently") to 31.8% ("never").

TABLE 5
PERCENTAGE OF RESPONSES BY TOP, MIDDLE, AND LOWER
MANAGEMENT LEVELS IN PARTICIPATION/NON
PARTICIPATION CATEGORIES OF SOCIAL ACTIVITIES

Group	N	Participatory Factor					Total
		Frequently	Often	Sometimes	Seldom	Never	
Top Mgmt	24	17.9%	8.3%	21.4%	27.8%	22.6%	168
Middle Mgmt	24	8.9%	17.8%	29.8%	26.8%	16.7%	168
Lower Mgmt	43	6.3%	11.9%	27.7%	22.3%	31.8%	336

Figure 3 portrays a profile of participation in social activities by the three management levels. In constructing the profile a subject response was given weights of 4, 3, 2, 1, and 0 for the following scales: "frequently", "often", "sometimes", "seldom", and "never". The mean of responses was plotted in Figure 3. The means for different social activities are located in Appendix B. A review of profiles reveals that there exists a parallel in the relationship of participation in poker, entertaining, night clubs,

volunteer activities, and service clubs. It also indicates the degree of dispersion that exists in dancing, volunteer activities, entertaining, and church activities, among levels of management. Time did not enable us to perform complete analysis of every activity.

Table 7 has presented the chi square value, the degrees of freedom, and level of significance for selected social activities; dancing, volunteer activities, and church activities. The obtained observations differ significantly at the .01 level of confidence in two of the three activities selected. A review of social activities profiles indicates that dancing, volunteer activities and church activities should discriminate managerial level with a high degree of confidence. However, in Table 7, only dancing and church activities in fact meet the criteria established to determine level of significance. A review of statistically significant social activities profiles shows that middle management enjoys dancing to a higher degree than other groups. 46% of middle management people indicated that they "frequently"/"often" participated in dancing, while 13% of the remaining subjects reported that they enjoyed dancing. The greatest degree of participation was by middle managers.

TABLE 7
VALUE OF CHI SQUARE FOR MANAGEMENT
LEVEL PARTICIPATION IN RECREATIONAL ACTIVITIES

Factor	Groups Compared	df	χ^2 Value
Dance	Top-Middle-Lower Mgmt	4	11.92 *
Volunteer Activities	Top-Middle-Lower Mgmt	4	7.46
Church Activities	Top-Middle-Lower Mgmt	4	8.29 *

* $p < .01$

In analysing church activities, the lowest level managers apparently are more religious than other levels of corporate supervisory personnel, followed by middle and top level people.

In summary, concerning the social types of recreational or leisure activities, the significant differences at the .001 level of confidence, as shown in Table 1, rejects the Null Hypothesis.

HOME TYPES OF RECREATIONAL OR LEISURE ACTIVITIES

Null Hypothesis 4 stated that there would be no significant differences in a comparison of top, middle, and lower management levels in their home types of recreational and leisure activities. The data portrayed in Table 8 presents the percentage computed from the collected raw data of responses in the five participating categories, by the three levels of management. Percentages were used in place of the raw data to provide a visual comparison of the responses by subjects drawn from three levels of the hierarchies. Reference to Table 2 illustrates the chi square statistic used to reject Null Hypothesis 4 at less than the .001 level of confidence. There was indeed a significant difference in participation in home activities by the subjects in the three management levels. Table 8 presents the percentage of response by twenty-four top level managers, twenty-four middle level managers, and forty-eight lower level managers, to the thirteen home activities listed under category "D" in the recreational activities instrument. In a comparison of top and middle managers, more top managers, as can be noted in the "never" category, did not participate in home types of recreational activities; however when they did participate, it can be noted

that they did so with a fairly even distribution, reflected by intensity of their interest, across the four categories.

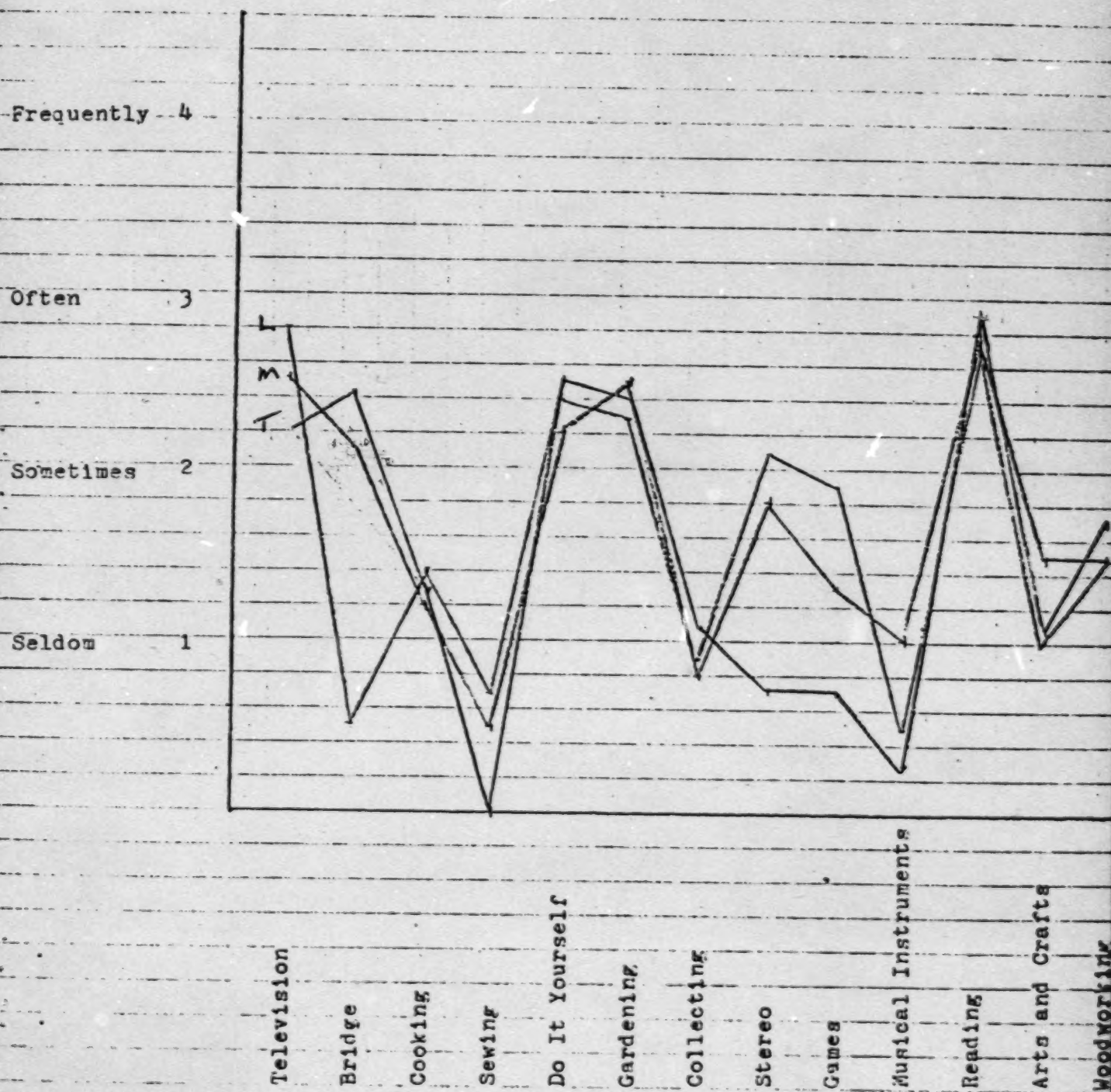
TABLE 8
PERCENTAGE OF RESPONSES BY TOP, MIDDLE, AND LOWER
MANAGEMENT LEVELS IN PARTICIPATION/NON
PARTICIPATION CATEGORIES OF HOME ACTIVITIES

Group	N	Participatory Factor					Total
		Frequently	Often	Sometimes	Seldom	Never	
Top Mgmt	24	11.9%	16.0%	17.6%	16.3%	38.2%	312
Middle Mgmt	24	7.4%	19.2%	25.0%	25.3%	23.1%	312
Lower Mgmt	48	9.3%	18.1%	24.5%	15.1%	33.0%	624

Middle managers tended to participate in a manner which definitely indicates a skewness to the right or appropriately to the less participatory behavior. However, it should be noted that in contrast to top management, the intensity of interest was less defined on the far end of the scale. The "frequent" and "often" categories received approximately 25% of responses, while the volume was spread evenly over the remaining categories. Table 8 also shows that lower level management subjects participated in a pattern generally in between the top and middle management. The lower level had the most significant deviation from this norm in the "seldom" category. Figure 4 more succinctly portrays a profile of participation in home activities by the three management levels.

A review of figure 4 revealed a parallel pattern of participation in woodworking, cooking, do-it-yourself, gardening, and reading, extracting the hierarchial level. It can also be noted that a degree of dispersion

FIGURE 4
 Recreational Activities Profile
 For Home Types of Activities for Top, Middle, Lower levels of Management



exists in bridge, stereo, and games, among the three levels of management. Time did not permit analysis of each activity in the home group. The same preceedures for developing the profile and applying the methodology for analysis, as discussed in the first section dealing with physical activities, were used here.

Table 9 presents the chi square values, degrees of freedom and the level of significance for the statistical analysis of bridge, games, and stereo, as the significant deviants in the home activities category. It can be noted that the obtained observations differ significantly from the computed profile at the .01 level of confidence, or lower, in all of the three home activities (refer to statistics of Table 2).

TABLE 9
VALUES OF CHI SQUARE FOR MANAGEMENT
LEVEL PARTICIPATION IN SELECTED HOME OR
SEDENTARY ACTIVITIES

Factor	Groups compared	df	χ^2 Value
Bridge	Top-Middle-Lower Mgmt	4	26.71
Stereo	Top-Middle-Lower Mgmt	4	33.62
Games	Top-Middle-Lower Mgmt	4	20.52

For bridge, a significant deviation occurred from the computed expected value. It is revealed by a review of the profile, that the majority of top level managers participated in bridge, middle managers more often in the "sometimes"/"seldom" range, and for lower management it could be concluded that they hardly ever participated in bridge as an activity. In fact, thirty-seven of the forty-eight lower level managers reported "never" playing

bridge. Generally then, it appeared that bridge is more significant as the level of management increased in the organizations observed. This is further illustrated by Figure 4.

The profile review for stereo indicated an increasing interest as analysis progresses down the hierarchial levels. This was true for all the participatory responses. It is significant to note that as the lower and middle managers became more interested, top level management interest declines. It should be noted that of twenty-four top level respondents, over 70% indicated a "never" response, whereas the "never" response was the lowest and markedly different answer for the middle and lower managers.

For games, a review of the profile noted that the largest deviation from the Table 2 statistic was in games, which is probably due to the more equal degrees of dispersion by the three levels of management. Top level managers show an increasing disinterest in games, whereas lower managers expressed the highest interest. This held true wherein the "never" responses were most frequently from top managers. Again, this is described by Figure 4.

In summary, concerning the home types of activities, the significant difference at the .001 level of confidence as shown in Table 2, and the rejection of Null Hypothesis 4, can be attributed primarily to those activities presented in Table 9. If time had permitted, this data on home activities could have also been analyzed in terms of age, income, various position, or educational level.

SUMMARY AND CONCLUSIONS

Through the use of a questionnaire which was sent to three levels of managers in the Consumers Power Company, and the International Harvester Corporation, this study attempted to analyze the interrelationships between management level and leisure activities. Certain significant differences were found between different levels of management's participation in different types of leisure activities.

Although data was obtained pertaining to age, income, educational level, and specific occupational position, no attempt was made to relate leisure activities to these other variables, mainly because they appear to be inextricably linked to the levels of management, especially age and income - both of which tend to go up along with level of responsibility.

This study, specifically, found relationships among levels of management and the following leisure activities:

Top management distinguished itself from middle and lower management by attending the theater and playing bridge. It distinguished itself from middle management by playing golf; and it also distinguished itself by frequency of travel. The investigators feel, however, that the latter activity may be work-related, rather than a true leisure activity, so travel should be viewed differently than the other distinguishing top management activities.

Middle management distinguished itself from the other levels by its participation in tennis and dancing.

Lower management distinguished itself from the other levels of management by its participation in church activities, stereo hobbies, and games,

as well as its non-participation in playing bridge. It also shared an interest in golf with top level managers, which distinguished it from middle managers--a new twist, when compared to previous research.

As the literature survey revealed, two research studies have been done which are somewhat related to this study. The first was done by Alfred C. Clarke (1956)¹, in Columbus, Ohio. Clarke used the North-Hatt Occupational Prestige Scale to set up his hierarchy of occupations, while this study only dealt with high, middle, and lower levels of management. The other study was done by Rabel J. Burdge (1969)², who also used the North-Hatt Occupational Prestige Scale in his survey in Alleghany County, Pennsylvania.

Without attempting to do numerical correlation studies, one can see some similarities in leisure activities and occupational levels which have not only lasted over the last twenty years, but which also lend some credence to our suspicions that this study is generalizable to a population wider than that of the managers we sampled. Activities related to dancing, stereos ("phonographs" in 1956), television, church, tennis, golf, and traveling (of various kinds) show up in all three studies, as leisure activities which do distinguish between various occupational levels.

¹ Alfred C. Clarke, "Leisure and Occupational Prestige," American Sociological Review, Vol. 21, No. 3 (June, 1956).

² Rabel J. Burdge, "Levels of Occupational Prestige and Leisure Activity," Journal of Leisure Research, Vol. 1, No. 3 (Summer, 1969).

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Interrelationships of Occupation and Leisure

Annotated Bibliography

- Bishop, Doyle W. "Stability of the Factor Structure of Leisure Behavior: Analyses of Four Communities." Journal of Leisure Research, Summer, 1970, pp. 160-170.

This study, although not directly related to the manager-leisure choice relationship is of some value, because of the careful statistical studies which were done. Two of the variables considered are income level and means years of education.

- Burch, William R. "The Social Circles of Leisure: Competing Explanations." Journal of Leisure Research, Spring, 1969, pp. 125-148.

This article considers some relationship between occupation and leisure activities, but is mainly interested in new sociological hypotheses of "compensation" and "familiarity."

- Burdge, Rabel J., "Levels of Occupational Prestige and Leisure Activity." Journal of Leisure Research, Summer, 1969, pp. 262-274.

This careful study examines the relationship between occupational prestige levels, as defined by the North-Hatt Occupational Prestige Scale and specific forms of leisure activities. The leisure activities are defined by the people who answered the questionnaires. Reference list included.

- Bush, George. Story of Michigan Consumers Power Company. McGraw-Hill, Inc., New York: 1973.

A book about the past, present and future intentions of an energy producer. It is largely a behavioralistic approach to "illuminating" the motivations and key decisions which contributed to the successful growth of Consumers Power.

- Hill, Roy. "A Manager Reaches Middle Age." International Management, February, 1973.

Basically, this article deals with middle-aged executives, their need for leisure (maybe), work satisfaction and preventative maintenance.

- Hobson, Bryan C., and Majeed Alsikafis. "Work and Leisure Profiles of University Professors." Sociological Abstracts, V. XXI, Supplement 31, SSS, p. 14.

This dissertation shows that age and political belief are significant predictors of work-leisure orientation of university professors.

- Kraus, Richard G. "Recreation for Rich and Poor: A Contrast." Teacher's College Record, May, 1966.

In a general way, this article deals with occupation (income) and choice of leisure activities, particularly how money determines demand. Includes a good bibliography.

Bibliography - 2

Larrabee, Eric and Meyersohn, Rolf, editors. Mass Leisure. The Free Press, Glencoe, Illinois: 1958.

This book is an absolute "FIND" for anyone interested in almost any aspect of leisure; contains the classic article "Leisure and Occupational Prestige" by Alfred C. Clarke, plus many others. Also of great interest is a 20 page, chronologically organized, comprehensive bibliography, compiled by Meyersohn.

Madow, Pauline, editor. Recreation in America. H. W. Wilson Co., New York: 1965.

This book is a compilation of articles from various periodicals, by such authors as Brooks Atkinson, Margaret Mead, Thorstein Veblen, Lyndon Johnson and Martin Neumeyer, and deals with four aspects of recreation. Perhaps of most interest is a 10 page bibliography.

Meyersohn, Rolf. "Sociology of Leisure in the United States: Introduction and Bibliography, 1945-1965." Journal of Leisure Research, Winter, 1969, pp. 53-68.

An excellent overview of the kinds of research which had been done in leisure and recreation up to that time. Excellent bibliography.

Montoye, Henry J., Metzner, Helen L, and Keller, Jacob B. "Active Leisure Activities as Related to Occupation." Journal of Leisure Research, Spring, 1970, pp. 104-111.

The findings in this article show no significant trends in relationship between occupation and active leisure activities. The authors feel that limiting their study to active leisure activities may have resulted in the lack of relationship they found.

Morris, Glenn, Pasewark, Richard. "Occupational Level and Participation in Public Recreation in a Rural Community." Journal of Leisure Research, Winter, 1972, pp. 25-32.

The authors found occupational level to be negatively and significantly associated with participation. Good bibliography.

Neumeyer, Martin and Esther. Leisure and Recreation. Ronald Press, 1958.

A classic primer on leisure and recreation research written in the early years of recreation research; deals with significance of leisure in a changing society.

Packard, Vance. The Status Seekers. David McKay Company, Inc., New York: 1959.

One of the first books for popular consumption to attempt to deal with the various phenomena of social class. Includes some interesting references. Highly readable.

Segall, Maurice. "Travel and Leisure in the 70's." S.A.M. Advanced Management Journal, October, 1972.

This article delineates the population and income shifts which are to be expected in the next 10 years. With the use of some income charts, the author is able to conclude, "...the American managerial class is the best equipped and financed and the most likely by natural inclination and a little bit of conditioning to take advantage of the leisure horn of plenty that is beginning to deluge us."

VanDoren, Carlton S., Smith, Stephen. "Listings of Dissertations and Theses in Leisure and Recreation." Journal of Leisure Research, Fall, 1972, pp. 366-377.

Warwick, Paula, Bishop, Doyle. "A Bibliography of Literature Dealing with the General Concept of Time, Time-related Date Analysis, and Time Budge Studies—with an Emphasis on Leisure." Journal of Leisure Research, Summer, 1972, pp. 232-244.

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Beside each of the following activities please indicate your degree of participation, either as a spectator or a participant.

"A"	<u>FREQUENTLY</u>	<u>OFTEN</u>	<u>SOMETIMES</u>	<u>SELDOM</u>	<u>NEVER</u>
Tennis	_____	_____	_____	_____	_____
Golf	_____	_____	_____	_____	_____
Skiing	_____	_____	_____	_____	_____
Camping	_____	_____	_____	_____	_____
Hunting	_____	_____	_____	_____	_____
Fishing	_____	_____	_____	_____	_____
Team Sports	_____	_____	_____	_____	_____
Boating	_____	_____	_____	_____	_____
Swimming	_____	_____	_____	_____	_____
Bowling	_____	_____	_____	_____	_____
Archery	_____	_____	_____	_____	_____
Handball	_____	_____	_____	_____	_____
Bicycling	_____	_____	_____	_____	_____
Jogging	_____	_____	_____	_____	_____
Karate, Judo	_____	_____	_____	_____	_____
Traveling	_____	_____	_____	_____	_____
Attend Theater	_____	_____	_____	_____	_____
Attend Concerts	_____	_____	_____	_____	_____
Attend Movies	_____	_____	_____	_____	_____
Amateur Theater	_____	_____	_____	_____	_____
Play Musical Instrument	_____	_____	_____	_____	_____
Symphony or Orchestra	_____	_____	_____	_____	_____
Painting	_____	_____	_____	_____	_____
"C"					
Dancing	_____	_____	_____	_____	_____
Poker	_____	_____	_____	_____	_____
Entertaining	_____	_____	_____	_____	_____
Night Clubs	_____	_____	_____	_____	_____
Volunteer Work	_____	_____	_____	_____	_____
Church Activities	_____	_____	_____	_____	_____
Service Clubs	_____	_____	_____	_____	_____

"D"

FREQUENTLYOFTENSOMETIMESSELDOMNEVER

.T. V.

. Bridge

. Woodworking

. Cooking

Sewing

Do-it-Yourself

Gardening

Collecting

Stereo

Games

Play Musical Instrument
Family

Reading

Arts and Crafts

Appendix B

Means for the different recreational activities

	Top	Middle	Lower
Tennis	1.1	2.3	.6
Golf	3.3	2.5	2.0
Skating	.9	.9	.6
Camping	.9	.5	1.0
Hunting	1.4	.8	1.4
Fishing	1.8	1.5	1.8
Team Sports	.8	2.0	1.4
Boating	1.8	2.0	1.5
Swimming	1.5	1.6	2.3
Bowling	1.1	1.1	1.6
Archery	.0	..25	.4
Handball	1.5	.8	.5
Bicycling	1.8	1.7	1.9
Jogging	1.7	1.4	.8
Karate, Judo	.0	.3	.1
Traveling	3.2	1.8	1.6
Attend Theatre	3.0	1.5	1.6
Attend Concerts	2.5	1.4	1.4
Attend Movies	1.5	1.05	1.4
Amateur theatre	1.0	.7	.8
Play musical instruments	.4	.5	.2
Paint	.8	1.0	.3
Dancing	2.4	2.2	.9
Poker	1.1	1.8	1.1
Entertaining	.7	1.9	1.7
Night Clubs	.7	1.2	1.1
Volunteer Activities	.3	2.4	1.9
Church Activities	1.6	1.5	1.8
Service Clubs	1.1	1.4	1.1
Television	2.2	2.5	2.8
Bridge	2.4	2.1	.5
Woodworking	1.7	1.5	1.5
Cooking	1.3	1.2	1.4
Sewing	.0	.5	.7
Do It Yourself	2.5	2.2	2.4
Gardening	2.4	2.5	2.3
Collecting	1.1	.8	.9
Stereo	.7	1.8	2.1
Games	.7	1.3	1.9
Musical Instruments	.3	1.0	.5
Reading	2.9	2.8	2.7
Arts and Crafts	1.1	1.5	1.0

APPENDIX C

TABULATION OF DATA

	<u>T</u>	<u>M</u>	<u>L</u>		<u>T</u>	<u>M</u>	<u>L</u>	
I. Age:	1	1	15	below 30	2	4	9	45-49
	5	3		30-34	9	2	5	50-54
	3	8		35-39	4	2	5	55-59
	4	7	2	40-44	4	0	1	60 or over

II. Yearly Salary:

T M L
4 Below 10,000

104410,000 - 20,000

24 14 0 Over 20,000

III. Sex: $\frac{T}{24} \frac{M}{24} \frac{L}{45}$ Male $\frac{T}{\quad} \frac{M}{\quad} \frac{L}{\quad}$ Female

IV. Education Completed:

$\frac{T}{2} \frac{M}{10} \frac{L}{}$ High School
 $\frac{T}{2} \frac{M}{5} \frac{L}{15}$ Some College
 $\frac{T}{16} \frac{M}{12} \frac{L}{36}$ BA
 $\frac{T}{5} \frac{M}{5} \frac{L}{5}$ MA
 $\frac{T}{1} \frac{M}{}$ MA+

V. Your present position: (e.g. foreman, lineman, office clerk; accounts supervisor, staff, etc.)
Foremen to Vice Presidents

VI. Ethnic Background:

<u>T</u> <u>M</u> <u>L</u>	<u>T</u> <u>M</u> <u>L</u>	<u>T</u> <u>M</u> <u>L</u>
American Indian	2 / Black	1 Mexican-American
<u>T</u> <u>M</u> <u>L</u>	<u>T</u> <u>M</u> <u>L</u>	
Oriental	24 21 47 White	

(A)	<u>T M L</u> <u>FREQUENTLY</u>	<u>T M L</u> <u>OFTEN</u>	<u>T M L</u> <u>SOMETIMES</u>	<u>T M L</u> <u>RARELY</u>	<u>T M L</u> <u>NEVER</u>
Tennis	0 9 2	4 4 1	4 1 3	2 4 1	9 6 31
Golf	16 7 14	4 4 8	1 8 5	0 5 9	3 0 12
Skiing	2 1 0	0 0 2	2 5 7	10 7 7	10 11 32
Camping	1 0 3	3 1 5	3 2 7	8 4 9	9 12 24
Hunting	5 1 5	3 1 6	0 2 9	4 7 9	12 11 21
Fishing	4 1 9	6 3 5	3 7 14	3 7 8	8 4 12
Team Sports	0 2 3	2 2 4	2 8 15	10 3 10	10 4 16
Boating	4 4 5	3 4 5	2 7 11	5 5 14	5 4 13
Swimming	0 2 8	3 3 10	12 1 21	3 10 6	6 3 3
Bowling	1 0 7	3 1 8	2 9 17	10 5 11	8 9 11
Archery	0 0 0	0 0 0	0 1 3	1 4 12	23 19 33
Handball	6 1 0	3 0 3	2 4 5	0 8 7	13 11 33
Bicycling	4 3 3	4 1 7	5 10 20	5 7 10	6 3 8
Jogging	6 1 0	3 2 3	3 9 9	2 5 11	10 7 25
Karate, Judo	0 0 0	0 2 2	0 0 0	0 1 1	24 21 45
Traveling	14 0 0	3 6 14	6 8 17	0 10 4	1 0 13
Total	63 32 59	44 39 77	52 87 163	68 96 139	157 130 338
(B)					
Attend Theater	9 1 7	7 2 2	3 11 14	5 4 15	1 6 10
Attend Concerts	6 0 6	6 2 6	4 13 6	4 5 17	4 5 13
Attend Movies	1 1 1	1 3 2	10 6 19	8 9 18	4 4 8
Amateur Theater	0 1 1	0 0 2	7 4 9	10 7 12	7 12 24
Play Musical Instrument Symphony or Orchestra	2 1 1	0 1 1	0 2 1	0 0 1	22 20 44
Painting	1 1 1	0 1 1	5 4 5	3 9 4	15 9 37
Total	19 5 17	14 9 14	29 40 54	29 34 67	53 56 136
(C)					
Dancing	1 5 3	2 6 4	6 6 14	6 4 12	9 3 15
Poker	6 1 2	1 10 2	3 3 13	6 2 11	8 9 20
Entertaining	4 0 3	3 3 6	11 11 17	4 9 13	2 1 9
Night Clubs	1 0 1	0 0 3	1 10 15	13 9 12	9 5 17
Volunteer Work	5 5 2	3 4 9	4 11 17	10 4 10	2 0 10
Church Activities	2 1 8	2 4 9	9 7 10	7 8 7	4 4 14
Service Clubs	11 3 2	3 3 2	2 2 7	4 9 10	4 7 22
Total	30 15 21	14 30 40	36 50 93	60 45 75	38 28 107

	<u>T M L</u> <u>FREQUENTLY</u>	<u>T M L</u> <u>OFTEN</u>	<u>T M L</u> <u>SOMETIMES</u>	<u>T M L</u> <u>SELDOM</u>	<u>T M L</u> <u>NEVER</u>
(D)					
T. V.	<u>3 1 8</u>	<u>8 12 26</u>	<u>5 9 10</u>	<u>6 2 2</u>	<u>2 0 2</u>
Bridge	<u>10 1 1</u>	<u>2 5 2</u>	<u>5 5 4</u>	<u>1 4 4</u>	<u>6 9 37</u>
Woodworking	<u>2 1 7</u>	<u>5 4 9</u>	<u>6 12 12</u>	<u>6 6 12</u>	<u>5 1 13</u>
Cooking	<u>2 2 1</u>	<u>2 1 6</u>	<u>7 5 18</u>	<u>5 10 9</u>	<u>8 6 14</u>
Sewing	<u>0 0 0</u>	<u>0 1 1</u>	<u>0 2 11</u>	<u>1 6 7</u>	<u>23 15 29</u>
Do-it-Yourself	<u>6 6 11</u>	<u>8 6 15</u>	<u>4 4 11</u>	<u>3 2 3</u>	<u>4 6 8</u>
Gardening	<u>5 6 10</u>	<u>8 7 13</u>	<u>4 6 13</u>	<u>3 3 4</u>	<u>4 2 8</u>
Collecting	<u>0 0 2</u>	<u>1 2 2</u>	<u>7 4 9</u>	<u>5 5 9</u>	<u>11 13 26</u>
Stereo	<u>0 0 6</u>	<u>2 7 10</u>	<u>3 7 14</u>	<u>5 8 16</u>	<u>14 2 2</u>
Games	<u>1 0 3</u>	<u>0 3 10</u>	<u>4 6 21</u>	<u>5 11 7</u>	<u>14 4 7</u>
Play Musical Instrument Family	<u>0 2 2</u>	<u>2 0 0</u>	<u>12 5 4</u>	<u>0 5 6</u>	<u>22 12 36</u>
Reading	<u>6 2 12</u>	<u>11 11 16</u>	<u>5 8 15</u>	<u>2 3 3</u>	<u>0 0 2</u>
Arts and Crafts	<u>1 2 0</u>	<u>1 1 3</u>	<u>5 5 11</u>	<u>9 14 12</u>	<u>8 2 22</u>
Total	<u>37 23 58</u>	<u>50 60 113</u>	<u>55 78 153</u>	<u>51 79 94</u>	<u>118 72 206</u>